



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/501,867

07/20/2004

Edwin W O'Brien

540-513

5033

23117

7590

10/31/2008

NIXON & VANDERHYE, PC

901 NORTH GLEBE ROAD, 11TH FLOOR

ARLINGTON, VA 22203

EXAMINER

MAY, ROBERT J

ART UNIT

PAPER NUMBER

2885

MAIL DATE

DELIVERY MODE

10/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

RECORD OF ORAL HEARING
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EDWIN W. O'BRIEN,
ANDY YIASOUMI,
DAVID C. RICHARDSON
and NATHALIE PLOUZENNEC

Appeal 2008-1385
Application 10/501,867
Technology Center 2800

Oral Hearing Held: Thursday, August 14, 2008

Before BRADLEY R. GARRIS, CHUNG K. PAK, and PETER F. KRATZ,
Administrative Patent Judges

ON BEHALF OF THE APPELLANT:

STANLEY C. SPOONER, ESQ.
Nixon & Vanderhye, PC
901 North Glebe Road, 11th Floor
Arlington, Virginia 22203

1 The above-entitled matter came on for hearing on Thursday,
2 August 14, 2008, commencing at 1:01 p.m., at the U.S. Patent and
3 Trademark Office, 600 Dulany Street, 9th Floor, Alexandria, Virginia,
4 before Jennifer M. O'Connor, Notary Public.

5 THE CLERK: Calendar number 19, Mr. Spooner.

6 JUDGE GARRIS: Good afternoon, Mr. Spooner.

7 MR. SPOONER: Good afternoon, gentlemen. As she
8 indicated, I'm Stanley Spooner, representing Airbus UK, Limited [sic, BAE
9 Systems plc]. The problem solved by the present invention relates to aircraft
10 landing lights. High-intensity aircraft landing lights have become brighter
11 and brighter and brighter as the years go by and they give off more and more
12 heat.

13 The problem is that heat tends to melt or degrade the
14 transparent plastic that is used as a cover in front of the aircraft landing light.
15 Many times they're embedded in the wing root or outside on the leading
16 edge of the wing, and so that cover is an aerodynamic shape as well.

17 Past solutions to that problem have included, as disclosed in the
18 Carlson reference, the use of liquid cooling. It actually has a film of liquid
19 that is sandwiched next to the plastic. It circulates a cooling liquid, ethylene
20 glycol, and water past the light and then radiates the heat absorbed later.

21 Unfortunately, that's a fairly heavy expense, given aircraft
22 technology these days, and obviously it decreases fuel mileage and that sort
23 of thing, increases costs. So it would be nice to not have to use such an
24 active system, and obviously with an active system, if the pump fails, the
25 system fails and you burn out a covering or worse.

26 So the applicant came up with a way of using reflectors,
27 particularly IR reflectors, to divert most of the heat radiation away from,

1 going through this protective cover so that that, combined with the normal
2 aerodynamic flow over the cover, is sufficient to prevent degradation of the
3 plastic or melting of the plastic.

4 The claims, we have two independent claims, 1 and 9. One
5 says an aircraft exterior light cover, it includes a reflective element angled
6 with respect to the light cover for reflecting a portion of the emitted IR away
7 from the light cover and away from the light source. It has to do all of those
8 things, so it's a fairly narrow claim.

9 Claim 9, not limited to aircraft, but further limited, it says a
10 light source mounted within a housing, a light cover placed over the light
11 source, a reflective element between the light source and the light cover. So
12 that's positional limitation, and then angled with respect to the light cover for
13 reflecting a portion of the emitted IR away from the light cover and
14 substantially away from the light source. So the question is, does the prior
15 art fairly show those features? And it's our contention that it does not.

16 Looking at the Examiner's position regarding claim 9, that's a
17 rejection based on section 102, and that requires each and every claimed
18 element arranged as in the claim. That's the basic decision in the Lindemann
19 case. The Gray reference, the Examiner, it teaches a light source and a
20 reflector in a housing which reflects IR, but passes visible light. But he
21 doesn't really have the arrangement that we're talking about in claim 9. The
22 examiner admits that Gray fails to disclose the covers comprising in that
23 aircraft exterior light cover. That's on page four of the final rejection.

24 JUDGE KRATZ: That's not in claim 9, correct?

25 MR. SPOONER: No, you're absolutely right. But it's on page
26 four and we want to remember that because when the Gray reference is
27 applied against claim 9, that is -- claim 1, it's significant. The examiner

1 doesn't really identify any reasonable structure in Gray which corresponds to
2 the claimed light cover. Now he does suggest that in Gray the protective
3 cover 10 is the light cover.

4 Well, that's not reasonable because as discussed in the
5 Specification, and as would be well known to those of ordinary skill in the
6 art, the term "light cover" is used for something that is relatively transparent
7 that the light goes through.

8 JUDGE KRATZ: What part are we talking about when you say
9 that, because you just acknowledge that claim 9 is not limited to the --

10 MR. SPOONER: To aircraft.

11 JUDGE KRATZ: The aircraft, right.

12 MR. SPOONER: Yes, sir, but it still is limited to a light cover.

13 JUDGE KRATZ: And so there are no light covers that don't
14 transmit light, you're saying?

15 MR. SPOONER: Absolutely correct. Absolutely correct. I'm
16 saying that that construing light coverage to be so broad as to encompass
17 "light covers" that don't transmit light is an unreasonable interpretation, both
18 by those of ordinary skill in the art just reviewing the claim language, but
19 also it's inconsistent with the definition of light cover set out in the
20 Applicants' Specification.

21 JUDGE KRATZ: Now with respect to -- first, before you get to
22 the definition that you say you have, you're arguing -- doesn't the cover of
23 the Gray reference actually transfer -- first it transfers IR light, not visible
24 light, but transfers IR radiation, and it transfers visible light into the chamber
25 that it's attached to through the opening and between that cover and the
26 chamber?

1 MR. SPOONER: I am not sure and I don't think it's clearly
2 shown in Gray, and here's the reason why. If you look at Gray's Figure 1,
3 the light coming out to the side, he says reflected infrared rays. There's no
4 hole shown in that protective cover 10, and so all I'm assuming happens is
5 the infrared strikes the side of the protective cover, which is recited in the
6 Spec. as being a metal or other material, heats it up and that hot side then
7 further irradiates the infrared out. That's the only explanation I have for
8 showing those arrows as being both dotted lines inside and outside the
9 housing. Same thing for the vertical ones, the ones going downward.

10 JUDGE KRATZ: What about the ones that go inward to the
11 chamber?

12 MR. SPOONER: The ones that go inward to the chamber go
13 through that item 12. I think that's a viewport rim, whatever the viewport is.
14 I guess 13 is the actual viewport, yeah, 13. And so those go through the
15 viewport. But the Examiner is not contending that the viewport is the light
16 cover. He's contending that housing 10, the protective cover, is the light
17 cover.

18 We'd have a different argument if he pretended that the other --
19 that this viewport was the light cover. But that's not -- that's not the
20 argument that he's making. So it's got to be transparent. It's got -- the light
21 cover has to transmit the light from the light source.

22 JUDGE KRATZ: The second part of that argument that I --
23 that you made was that the term "light cover" was defined in your
24 Specification to require it.

25 MR. SPOONER: Yes, sir.

26 JUDGE KRATZ: Could you point us to that definition?

1 MR. SPOONER: That's at page three, lines 10 to 11. It talks
2 about the light cover comprises "a transparent element 2 that is substantially
3 the size and shape of the required light cover." So that's the transparent
4 element 2.

5 JUDGE KRATZ: That's an embodiment of your invention that
6 you're describing there. It's not necessarily what your claims -- why would
7 your -- why is that a definition that your claims would be limited to?

8 MR. SPOONER: Well, the claim has -- if there's any
9 indefiniteness as to the claim -- and I think that both claims are clear that the
10 light has to transfer, has to pass through the cover, otherwise, it is of little
11 utility. If the light passes through the cover, it has to have some level of
12 transparency, and the specification just confirms that in all embodiments the
13 cover has some level of transparency. It's consistent with the knowledge of
14 one of ordinary skill in the art in terms of construing those claim terms.

15 JUDGE KRATZ: If we didn't construe it that way, we'd
16 construe it that you were importing a limitation into your [claims]--
17 pretending to import a limitation into your claim rather than going through
18 the Spec. to find a definition for a term. Would this claim otherwise define
19 over the structure of Gray?

20 MR. SPOONER: Assuming for the purpose of argument that
21 we concede that it -- the claim is not limited, I still think that there are other
22 arguments.

23 JUDGE KRATZ: That you made in the Brief?

24 MR. SPOONER: Well, they're made in the Brief, but I can
25 reiterate them here briefly, if you'd like. The Gray reference doesn't teach
26 the requirement of a reflective element located between the light source and
27 the light cover. If you assume that the protective cover 10, that housing, is

1 the light cover, then you can argue that those two reflectors in there are these
2 reflective elements.

3 I'm not sure that they are located, though, between the light
4 source and the light cover. I guess you could argue that both of them are
5 located between one end of the housing and the light source, but I think
6 that's a little bit of a stretch.

7 The other -- the other part is that claim 9 requires that those
8 reflectors reflect light, the IR, away from the light cover and substantially
9 away from the light source. So depending upon what you consider to be the
10 light cover, it's reflecting it towards it, not away from it. If you're going to
11 construe housing 10, the protective cover 10, to be the light cover, then it's --
12 then these reflectors are reflecting the IR towards the light cover, not away
13 from it.

14 So I mean, I think no matter how you construe it, it doesn't meet
15 the claim. And we've tried to make that point in the Specification, in the
16 Appeal Brief and in the Reply Brief, but I think it's a matter of sort of
17 common knowledge, just looking at what the claim requires.

18 And again, the claims aren't construed in a vacuum. It's a light
19 assembly, a light source, mounted within a housing, a light cover, a
20 reflective element, and then it recites specific interrelationships between two
21 or more of those elements, and those are the interrelationships that the Gray
22 reference has to show. It has to show all of them, otherwise, it's not a proper
23 basis for a 102.

24 JUDGE KRATZ: What about your arguments for the other
25 independent claim?

26 MR. SPOONER: Claim 1. Claim 1 is only rejected as obvious
27 over the Gray reference combined with the Carlson reference. Carlson is the

1 only one of those two references that has any inkling of what the problem is.
2 It's trying to solve the problem of heat being absorbed by that plastic --
3 transparent plastic cover.

4 Carlson teaches a completely different solution, so he
5 recognizes the problem, but he says, use this liquid cooling system to cool
6 the light cover and prevent it from melting. It has nothing to do with
7 reflectors.

8 JUDGE PAK: Counsel?

9 MR. SPOONER: Yes.

10 JUDGE PAK: Why couldn't one skilled in the art use the
11 solution provided by Gray, which also deflects the heating source away from
12 the cover?

13 MR. SPOONER: You certainly could. You certainly could if
14 there was any reason or motivation to pick and choose elements. Because as
15 you understand, we know all the elements and we know all the properties of
16 the element. It is, therefore, not obvious to pick and choose elements and
17 then combine them into particular molecules that do particularly good things
18 unless there's some suggestion.

19 JUDGE PAK: Counsel, what we are dealing with is not the
20 molecules. What we are dealing with is the problem, as you have pointed
21 out, recognized by one skilled in the art, and come up with a solution to
22 reduce that heat as a result of that infrared light coming from the light
23 source. And the second reference teaches you could also get rid of heat
24 resulting from the infrared light source, so you are looking at the two
25 interchangeable -- functionally interchangeable components.

26 MR. SPOONER: I disagree.

1 JUDGE PAK: That could perform more or less the same
2 function.

3 MR. SPOONER: I disagree completely. The Carlson reference
4 recognizes the problem, but it teaches a specific solution to that problem. It
5 says the way you solve it is not by worrying about reflectors or anything else
6 or anything in the Gray reference. It says you solve the problem by using
7 this liquid cooling system. That's -- it would lead one of ordinary skill in the
8 art to use the conventional cooling system.

9 Look at the Gray reference. There's nothing about the Gray
10 reference other than the fact that you can have a spectrum sensitive reflector.
11 There's nothing about Gray that recognizes any problem with cooling of
12 aircraft landing light covers. So why would someone trying to solve that
13 problem look to the Gray reference? It's not even an analogous field, and
14 I'm not sure that an analogous field is the appropriate --

15 JUDGE PAK: But Gray does recognize that the infrared light
16 deflector prevents heating resulting from that infrared light coming from the
17 light source, so it does relate to the same type of problem told by Carlson.

18 MR. SPOONER: I'm not sure that's totally correct. I think
19 Gray does recognize the use of a frequency spectrum selective reflector to
20 direct infrared radiation elsewhere. It doesn't -- if we -- if the protective
21 cover 10 is the light cover, it's directing the light to that -- the IR light that's
22 going to produce the heat directly to that cover. It's not reflecting it away
23 from the cover.

24 JUDGE PAK: But --

25 MR. SPOONER: If you assume that -- excuse me just a
26 second. I'm going to make the corollary based on the alternative
27 construction. If you use viewport 13 as the light cover, it reflects the IR

1 away from that, but you don't have the other relationships that are specified
2 in claim 1. So the only way the Examiner can make his case is to ignore all
3 of the other aspects of each reference and pick only a single bit and piece out
4 of each one.

5 He's picking only the IR reflector out of Gray. He's then having
6 to ignore and there's no reason why he -- one would ignore, but the
7 Examiner doesn't explain it. But you would have to ignore the solution to
8 the problem that Carlson teaches, the liquid cooling, and then you would
9 have to know to combine the reflector in the manner that claim -- claim 1
10 specifies in the particular direction, angled so as to direct the IR radiation
11 away from the cover, away from the light source, all of those features. I
12 think that that is just prohibited 20/20 hindsight. But that's ---

13 JUDGE KRATZ: I believe you raised in your Brief the concept
14 that this Carlson reference was concerned about heat-seeking missiles or is
15 that just --

16 MR. SPOONER: No, that was raised and I'm glad you
17 mentioned it. The Examiner raised that issue in his justification for
18 combining Gray and Carlson and I don't know what possessed him to make
19 the argument that because heat-seeking missiles followed infrared radiation,
20 what that had to do with why one would want to modify either Gray or
21 Carlson --

22 JUDGE KRATZ: Carlson raises that as a function of their
23 system.

24 MR. SPOONER: For cooling a light cover?

25 JUDGE KRATZ: For cooling -- for having that medium, that
26 medium in there to prevent, I guess, the heat-seeking missile from attach --
27 you know, being attracted to that, to the source of heat.

1 MR. SPOONER: I don't think I saw that in Carlson.

2 JUDGE KRATZ: In column two, maybe at the bottom of lines
3 50 to 55.

4 MR. SPOONER: Right. Yeah, in order to eliminate the
5 lighting system as a tracking source for a heat-seeking missile.

6 JUDGE KRATZ: And they go on to discuss that later on in
7 summary?

8 MR. SPOONER: Right.

9 JUDGE KRATZ: So maybe that's why he raised it.

10 MR. SPOONER: I guess that's why he raised it, but in the
11 context of his argument, I didn't see that it made any sense at all and so as
12 you can see by the Appeal Brief, I sort of dismissed it. Is he saying that -- I
13 mean, I'm assuming for the purpose of argument that Carlson clearly teaches
14 a solution to the problem. He teaches a liquid cooling solution to the
15 problem.

16 Why you -- why you need that solution is irrelevant, whether
17 you're trying to prevent the cover from melting or whether you're trying to
18 prevent the tracking of heat-seeking missiles. I concede for the purpose of
19 argument that Carlson teaches a solution to the problem. The only problem
20 is it teaches a different solution and Applicants' entitled to their solution if
21 it's patentably unobvious.

22 And we think that Carlson would take -- as Judge Pak says,
23 would take the teaching of Gray, but it wouldn't necessarily substitute the
24 Gray element in the manner that we have claimed. You might -- you might
25 want to try that, obvious to try, but it would take an awful lot of tinkering to
26 figure out how to do it, I think, without the patent [sic, Application]
27 Specification.

1 JUDGE KRATZ: In [the] sense of KSR, obvious to try?

2 MR. SPOONER: In the sense of KSR, the Supreme Court, a lot
3 of people take that out of context, I think. I think what KSR says is that the
4 Examiner still has an obligation to provide an explicit analysis of his
5 rationale or her rationale for picking and choosing elements and then
6 combining them. You can't just stick in the mere conclusory statement that
7 it would be obvious to pick this piece from this one, this piece from this one,
8 and combine them in the manner of the claims.

9 I think we will see in future Federal Circuit cases that view of
10 KSR. I don't take KSR as teaching that because every element is known and
11 every element's interrelationship with other elements is known. That means
12 every possible compound of elements is known and obvious. It doesn't say
13 that and I don't think it goes that far. But everybody can pick and choose the
14 words from whatever decision that they want to support their conclusions.

15 JUDGE PAK: Counsel?

16 MR. SPOONER: Yes, sir.

17 JUDGE PAK: What would be your argument if in fact the
18 viewing port is considered as [a] cover within the meaning of your claim 9?

19 MR. SPOONER: Claim 9? Okay, claim 9?

20 JUDGE PAK: Yes.

21 MR. SPOONER: If the viewing port is taken to be the light
22 cover, then protective cover 10 is the housing. So I'm not sure that that
23 viewing port is a light cover placed over the light source. But for the
24 purpose of argument, assume that it is, a reflective element is between the
25 light source and the light cover.

26 Well, I guess you could argue that it was optically between,
27 even though it's not literally between. You can argue that the reflective

1 element is angled with respect to the light cover. If the light cover is planar,
2 in the plane of the side of the housing, both of them are angled.

3 For reflecting a portion of the emitted infrared radiation away
4 from the light cover, well, if 13 is the light cover, you could argue that it
5 reflects that one portion that goes into the side of the housing and is
6 absorbed and then reradiated. You could argue that that is radiation away
7 from the light cover since it goes in the opposite direction.

8 There is also some that goes in the same direction, but again,
9 you could argue that that's a way. You could argue that it's substantially
10 away from the light source.

11 But none of those are issues that are before the Board. Those
12 are the Examiner -- the Examiner has said in an attempt to construe the claim
13 -- I mean, I can go in -- there are presumably other reasons which we haven't
14 even looked at because it's not necessary. Where or how Gray teaches
15 what's in 9 I think is still debatable if the Examiner changes his position and
16 holds that the viewport 13 is the light cover and that the protective cover 10
17 is not the light cover but the housing.

18 JUDGE GARRIS: Any other questions, Judge Pak? Judge
19 Kratz? Mr. Spooner, thank you very much.

20 MR. SPOONER: Thank you, gentleman, for your attention.
21 Appreciate it.

22 Whereupon, at 1:25 p.m., the proceedings were concluded.

23